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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,452	01/15/2004	Walter H. Delashmit JR.	2063.007100	5621

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EXAMINER

LUU, CUONG V

ART UNIT	PAPER NUMBER
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2128

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/758,452

Applicant(s)

DELASHMIT ET AL.

Examiner

Cuong V. Luu

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 7, 10, 11, 16-20, 23-46, 52-55 and 58-84 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-2, 4, 7, 10-11, 16-20, 23-46, 52-55, and 58-84 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The Examiner would like to thank the Applicant for the well-presented response, which was useful in the examination. The Examiner appreciates the effort to perform a careful analysis and make appropriate amendments to the claims.

Claims 1-2, 4, 7, 10-11, 16-20, 23-46, 52-55, and 58-84 are pending. Claims 3, 5-6, 8-9, 14, 47-51, and 56-57 have been canceled. Claims 64-84 have been added. Claims 1-2, 4, 7, 10-11, 16-20, 23-46, 52-55, and 58-84 have been examined. Claims 1-2, 4, 7, 10-11, 16-20, 23-46, 52-55, and 58-84 have been rejected.

Response to Arguments

1. Applicant's arguments, see pp. 22-27, filed 12/08/2006, with respect to the U.S.C. 101 rejections of claims 1-23 and 44-63 have been fully considered and are persuasive. The U.S.C. 101 rejections of claims 1-23 and 44-63 have been withdrawn.
2. Applicant's arguments, filed 12/08/2006 see p. 27, with respect to the U.S.C. 112, 2nd paragraph rejection of claim 20 have been fully considered and are persuasive. The U.S.C. 112, 2nd rejection of claim 20 has been withdrawn.
3. Applicant's arguments, filed 12/08/2006 see pp. 27-31, regarding claims 1-5, 7-47, and 49-62 have been fully considered but they are not persuasive. The Applicant argues that Mueller is:
 - Non-analogous art. The Examiner respectfully disagrees. Mueller teaches an invention that develops a 3-D image of an object from a plurality of scanned images

(pp. 1-2 paragraph 0011), and the Applicant's admitted prior art, hereinafter the AAPA, teaches generating geometrical model of an object for integration into an ATR system (specification's p. 1, paragraphs 0004 and 0006). It would have been obvious to one of ordinary skill in the art to combine the teachings of Mueller and AAPA. AAPA's teachings would have provided the ability to automatically, and quickly view and classify objects (AAPA, p1, paragraph 0004). Therefore, these two are definitely analogous.

- Teaching away. The Applicant argues that Muller teaches that Mueller teaches that circumstance, which is precisely the problem Applicants are trying to overcome, is the preferable approach. Indeed, one circumstance that the present invention seeks to address is the situation in which the object to be modeled cannot actually be brought to the equipment that is to do the modeling. (§[0008]) Mueller, therefore, teaches away from Applicants' invention. The Examiner respectfully disagrees. The claimed invention only claims method and apparatus to generate 3-D images from a plurality of images for integration into an ATR system. Mueller teaches generating 3-D models from a plurality of images but does not teach integrating the 3-D images into an ATR system, and the AAPA teaches integrating images into an ATR system. It would have been obvious to one of ordinary skill in the art to combine the teachings of Mueller and AAPA. AAPA's teachings would have provided the ability to automatically, and quickly view and classify objects (AAPA, p1, paragraph 0004). Hence, the two references complement each other not disagreeing with each other.
- Mueller and the AAPA improperly combined. The Applicant argues that Mueller teaches away from the present invention. Hence, there cannot be motivation or suggestion to combine references. As discussed in the bullet immediately above

about teaching away, Mueller does not teach away from the AAPA. Hence, they are properly combined.

Claims 1-5, 7-47, and 49-62, therefore, remain rejected.

4. Applicant's arguments, filed 12/08/2006 see p. 31, regarding claim 64 have been fully considered but they are not persuasive. The Applicant argues that claim 64 recites a step of defining a 3D space from the object, which is not taught by the art of record. The Examiner respectfully disagrees. Muller teaches generating a preliminary 3-D geometry from object from the images to define a 3-D space (p. 2 paragraph 0014). This claim is, therefore, rejected.
5. Applicant's arguments, filed 12/08/2006 see pp. 31-32, regarding claim 76 have been fully considered but they are not persuasive. The Applicant argues that LADAR returns are not taught in the art of record. The Examiner respectfully disagrees. Mueller teaches using a laser positioning system for determining the position object (paragraph 0056) and then specifically mentions using LADAR in the process of active range finding in capturing data (p. 13 paragraphs 0145-0146). Therefore, Muller does teach using LADAR returns for generating a 3-D model. Claim 76, therefore, remains rejected.
6. Applicant's arguments, filed 12/08/2006 see p. 32, regarding claims 6 and 48 have been fully considered but they are not persuasive. The Applicant relies on arguments in response to rejections of claims 1-5, 7-47, and 49-63 to argue that claims 6 and 48 are allowable. Since claims 1-5, 7-47, and 49-63 remain rejected as discussed in item 3, claims 6 and 48 remain rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 74 and 74 are rejected under second paragraph of 35 U.S.C. 112 for insufficient antecedent basis.

7. Claims 74 and 75 recite the limitation "the programmed computer of claim 73" in line 1 respectively. There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1-2, 4, 7, 10-11, 16-20, 23-46, 52-55, and 58-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al, herein Mueller, (U.S. Pub. 2003/0071194 A1) in view of the applicants' admitted prior art, herein AAPA.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. As per claim 64, Mueller teaches a method for modeling an object in software, comprising:
- generating a three-dimensional geometry of the object from a plurality of points obtained from a plurality of images of the object, the images having been acquired from a plurality of perspectives (p. 3, paragraphs 0049-0050), including:
 - generating a preliminary three-dimensional geometry from object from the images to define a three-dimensional space (p. 2 paragraph 0014); and
 - generating the three-dimensional geometry from the images, the three-dimensional geometry being defined within the three-dimensional space (p. 3, paragraphs 0049-0050);
 - but does not teach the 3-D model generated for integration into an object recognition system.

The AAPA teaches this feature (p. 1, paragraphs 0004 and 0006).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Mueller and AAPA. AAPA's teachings would have provided the ability to automatically, and quickly view and classify objects (AAPA, p1, paragraph 0004).

9. As per claim 65, these limitations have already been discussed in claim 4. They are, therefore, rejected for the same reasons.

10. As per claim 66, these limitations have already been discussed in claim 7. They are, therefore, rejected for the same reasons.
11. As per claim 67, these limitations have already been discussed in claim 9. They are, therefore, rejected for the same reasons.
12. As per claim 68, Mueller teaches generating the three-dimensional model includes generating a three-dimensional model of LADAR returns from the object (p. 3, paragraph 0049; and p. 13, paragraph 0146).
13. As per claim 69, the AAPA teaches integrating generated model into a target recognition system (AAPA, p. 2, lines 15-17 and 20-25).
14. As per claim 70, Mueller teaches using microprocessor to perform a method of modeling an object using software (p.5, paragraph 0062). This teaching inherits a program storage medium with instructions that, when executed by a computing device, perform a method for modeling an object in software. The limitations have already been discussed in claim 64. They are, therefore, rejected for the same reasons.
15. As per claim 71, these limitations have already been discussed in claim 4. They are, therefore, rejected for the same reasons.

16. As per claim 72, these limitations have already been discussed in claim 68. They are, therefore, rejected for the same reasons.

17. As per claim 73, Mueller teaches:

a processor (fig. 2);

a bus system (fig. 2);

a storage with which the processor communicates over the bus system (fig. 2 and p.5, paragraph 0062);

the rest of the limitations have already been discussed in claim. They are, therefore, rejected for the same reasons.

18. As per claim 74, these limitations have already been discussed in claim 4. They are, therefore, rejected for the same reasons.

19. As per claim 75, these limitations have already been discussed in claim 68. They are, therefore, rejected for the same reasons.

20. As per claim 76, these limitations have already been discussed in claims 64 and 68. They are, therefore, rejected for the same reasons.

21. As per claim 77, these limitations have already been discussed in claims 69. They are, therefore, rejected for the same reasons.

22. As per claim 78, these limitations have already been discussed in claim 16. They are, therefore, rejected for the same reasons.
23. As per claim 79, Mueller teaches using microprocessor to perform a method of modeling an object using software (p.5, paragraph 0062). This teaching inherits a program storage medium with instructions that, when executed by a computing device, perform a method for modeling an object in software. The limitations have already been discussed in claim 76. They are, therefore, rejected for the same reasons.
24. As per claim 80, these limitations have already been discussed in claim 69. They are, therefore, rejected for the same reasons.
25. As per claim 81, these limitations have already been discussed in claim 16. They are, therefore, rejected for the same reasons.
26. As per claim 82, these limitations have already been discussed in claims 73 and 75. They are, therefore, rejected for the same reasons.
27. As per claim 83, these limitations have already been discussed in claim 69. They are, therefore, rejected for the same reasons.
28. As per claim 84, these limitations have already been discussed in claim 16. They are, therefore, rejected for the same reasons.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong V. Luu whose telephone number is 571-272-8572. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah, can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. An inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CVL


KAMINI SHAH
SUPERVISORY PATENT EXAMINER